In the Office Action mailed on July 2, 2009, claims 1, 2, and 4-16 are rejected. In response, claims 1, 13, and 15 have been amended. Additionally, new claims 17-21 have been added. Applicants hereby request reconsideration of the application in view of the claim amendments, the new claims, and the below-provided remarks.

Claim Rejections under 35 U.S.C. 101

Claims 1, 2, 4-9, and 13-16 are rejected under 35 U.S.C. 101 because the claimed invention is allegedly directed to non-statutory subject matter. In response, claims 1 and 15 have been amended to recite that "*the motion estimation unit, the quality measurement unit, the interpolation unit, and the control means are implemented using a processor*" (emphasis added). Additionally, claim 13 has been amended to recite that "*computing the motion vector field, computing the value of the quality measure, computing the first one of the output images, and controlling the interpolation of the pixel values are performed using a processor*" (emphasis added). Support for the amendments to claims 1, 13, and 15 is found in Applicants' specification at, for example, Fig. 1 and page 10, lines 24 and 25. Applicants respectfully submit that amended claims 1 and 15 are directed to statutory subject matter, a processor. Thus, Applicants respectfully request that the rejection of claims 1 and 15 under 35 U.S.C. 101 be withdrawn. Additionally, Applicants respectfully assert that amended claim 13 claims a process that is tied to statutory subject matter, a processor. Thus, Applicants respectfully request that the rejection of claim 5 under 35 U.S.C. 101 be withdrawn. As a result, Applicants respectfully request that the rejection of claims 1, 2, 4-9, and 13-16 under 35 U.S.C. 101 be withdrawn.

Clam Rejections under 35 U.S.C. 103

Claims 1, 2, and 4-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al (U.S. Pat. No. 7,042,512, hereinafter "Yang") in view of Demos (U.S. Pat. No. 6,442,203). However, Applicants respectfully submit that the pending claims are patentable over Yang in view of Demos for the reasons provided below.

Independent Claim 1

Claim 1 has been amended to recite in part that "*the interpolation unit mixes intermediate images from the motion compensated interpolation and from the alternative interpolation*" (emphasis added). Support for the amendments to claim 1 is found in Applicants' specification at, for example, Figs. 2 and 3, the paragraph between page 10, line 32 and page 11, line 7, and page 11, lines 16-26.

The Office Action states that Yang fails to teach that "*the interpolation unit is arranged to perform a motion compensated interpolation of the pixel values of the input images on basis of the motion vector field, if the value of the quality measure is lower than a predetermined threshold and is arranged to perform an alternative interpolation of the pixel values of the input images, if the value of the quality measure is higher than the predetermined threshold,*" as recited in claim 1 and that Demos teaches the above-identified limitation of claim 1. (See page 5 of the Office Action). However, Applicants respectfully assert that Demos fails to teach that "*the interpolation unit mixes intermediate images from the motion compensated interpolation and from the alternative interpolation*" (emphasis added), as recited in amended claim 1.

Demos teaches that a fall back value for pixels in a frame being constructed is needed in a position where no good match for motion compensation interpolation can be found. (See column 21, lines 36-42 of Demos). However, Demos fails to teach that intermediate images that are generated using the fall back value are mixed with intermediate images that are generated using motion compensated interpolation. Thus, Applicants respectfully assert that Demos fails to teach that "*the interpolation unit mixes intermediate images from the motion compensated interpolation and from the alternative interpolation*" (emphasis added), as recited in amended claim 1. Because Yang in view of Demos fails to teach all of the limitations in amended claim 1, Applicants respectfully submit that amended claim 1 is patentable over Yang in view of Demos.

Dependent Claims 2, 4-12, and 14

Claims 2, 4-12, and 14 depend from and incorporate all of the limitations of independent claim 1. Thus, Applicants respectfully assert that claims 2, 4-12, and 14 are allowable at least based on an allowable claim 1.

Independent Claim 13

Claim 13 has been amended in a similar fashion to claim 1. Support for the amendments to claim 13 is found in Applicants' specification at, for example, Figs. 2 and 3, the paragraph between page 10, line 32 and page 11, line 7, and page 11, lines 16-26. Because of the similarities between amended claim 13 and amended claim 1, Applicants respectfully assert that the remarks provided above with regard to amended claim 1 apply also to amended claim 13. Accordingly, Applicants respectfully submit that amended claim 13 is also patentable over Yang in view of Demos.

Independent Claim 15

In the Office Action, Yang is cited for teaching the quality measurement unit. (See page 4 of the Office Action). However, Applicants respectfully assert that Yang fails to teach that "*the quality measurement unit is arranged to compute the value of the quality measure on basis of the maximum of the differences between the motion vectors*" (emphasis added), as recited in claim 15. Thus, Applicants respectfully assert that claim 15 is patentable over Yang in view of Demos.

Yang teaches that when the magnitude of a motion vector, which is in a block in a field to be interpolated is at least a predetermined value, the motion vector of the block is compared with a global motion vector obtained from a current scene, where the motion vector with the most occurrences is used as the global motion vector. (See column 6, lines 1-32 of Yang). However, Yang fails to teach that the motion vectors of the field to be interpolated are compared and that the maximum of the differences between the motion vectors is obtained. Thus, Applicants respectfully assert that Yang fails to teach that "*the quality measurement unit is arranged to compute the value of the quality measure on basis of the maximum of the differences between the motion vectors*" (emphasis added), as recited in claim 15. Thus, Applicants respectfully submit that claim 15 is patentable over Yang in view of Demos.

Dependent Claim 16

Claim 16 depends from and incorporates all of the limitations of independent claim 15. Thus, Applicants respectfully assert that claim 16 is allowable at least based on an allowable claim 15.

New claims 17-21

New claims 17-21 have been added. Support for claims 17, 20, and 21 is found in Applicants' specification at, for example, Figs. 2 and 3, the paragraph between page 10, line 32 and page 11, line 7, and page 11, lines 16-26. Support for claim 18 is found in Applicants' specification at, for example, Fig. 2, the paragraph between page 10, line 32 and page 11, line 7, and page 11, lines 8-15. Support for claim 19 is found in Applicants' specification at, for example, Fig. 2, the paragraph between page 10, line 32 and page 11, line 7.

Claims 17 and 18 depend from and incorporate all of the limitations of independent claim 1. Thus, Applicants respectfully assert that claims 17 and 18 are allowable at least based on an allowable claim 1. Claims 19-21 depend from and incorporate all of the limitations of independent claim 15. Thus, Applicants respectfully assert that claims 19-21 are allowable at least based on an allowable claim 15. Additionally, claims 17-21 are allowable for further reasons, as described below.

Claims 17, 20, and 21

Claims 17 and 21 recite that "*the interpolation unit comprises a motion compensated interpolator to perform the motion compensated interpolation of the pixel values of the input images on the basis of the motion vector field, a non-motion compensated interpolator to perform the alternative interpolation of the pixel values of the input images, two multipliers that are controlled by the control means, and an adding unit.*" Applicants respectfully submit that Yang in view of Demos fails to teach the above-identified limitation in claims 17 and 21. Accordingly, Applicants respectfully submit that claims 17 and 21 are patentable over Yang in view of Demos.

Claim 20 recites that "*the interpolation unit mixes intermediate images from the motion compensated interpolation and from the alternative interpolation,*" which is

similar to the amendments to claim 1. Because of the similarities between claim 20 and amended claim 1, Applicants respectfully assert that the remarks provided above with regard to amended claim 1 apply also to claim 20. Accordingly, Applicants respectfully submit that claim 20 is patentable over Yang in view of Demos.

Claim 18

Claim 18 recites that "*the control means modifies the motion vector field from the motion estimation unit, wherein the interpolation unit computes the first one of the output images by means of interpolation of the pixel values of the input images based on the modified motion vector field*" (emphasis added). As described above, Yang teaches that when the magnitude of a motion vector in a block in a field to be interpolated is at least a predetermined value, the motion vector of the block is compared with a global motion vector obtained from a current scene, where the motion vector with the most occurrences is used as the global motion vector. However, Applicants respectfully submit that Yang fails to teach modifying a motion vector field from a motion estimation unit and performing motion compensated interpolation based on the modified motion vector field. Thus, Applicants respectfully submit that Yang fails to teach the above-identified limitation in claim 18. As described above, Demos teaches that a fall back value for the pixels in a frame being constructed is needed in a position where no good match for motion compensation interpolation can be found. However, Applicants respectfully submit that Demos fails to teach modifying a motion vector field from a motion estimation unit and performing motion compensated interpolation based on the modified motion vector field. Thus, Applicants respectfully submit that Demos also fails to teach the above-identified limitation in claim 18. As a result, Applicants respectfully submit that Yang in view of Demos fails to teach the above-identified limitation in claim 18.

Claim 19

Claim 19 recites that "*the interpolation unit comprises a motion compensated interpolator to perform the motion compensated interpolation of the pixel values of the input images on the basis of the motion vector field, a non-motion compensated interpolator to perform the alternative interpolation of the pixel values of the input*

images, and a switch coupled to the motion compensated interpolator and the non-motion compensated interpolator, wherein the switch is controlled by the control means"
(emphasis added). As described above, Demos teaches that a fall back value for the pixels in a frame being constructed is needed in a position where no good match for motion compensation interpolation can be found. However, Applicants respectfully assert that Demos is silent on the switch. Thus, Applicants respectfully submit that Yang in view of Demos fails to teach the above-identified limitation in claim 19.

<div align="center">

CONCLUSION

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Applicants respectfully request reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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